

REMARKS

Reconsideration of the rejections set forth in the Office Action is respectfully requested. By this Amendment, claims 1-20 have been canceled and new claims 21-40 have been submitted. Currently, claims 21-40 are pending in this application.

Rejections under 35 USC 103

In the Office Action dated June 27, 2008, the Examiner rejected claims 1-20 under 35 USC 103 as unpatentable over Chen (Flexible Control of a Parallelism in a Multiprocessor PC Router) in view of Applicants Admitted Prior Art (AAPA), and further in view of Venkatanarayan (U.S. Patent Application Publication No. 2005/0044221), and still further in view of Shneyderman (Mobile VPNs for next generation GPRS and UMTS networks). Alternatively, the Examiner rejected claims 1-20 under 35 USC 103 as unpatentable over Chen in view of AAPA, and further in view of Pham (U.S. Patent Application Publication No. 2003/0074473), and still further in view of Shneyderman.

Applicants have canceled the previous claims and submitted a new set of claims. Specifically, in the new set of claims applicants have presented three independent claims: a first independent claim which is directed to assigning tunnels based on an absolute capacity, a second independent claim that is directed to assigning tunnels based on a relative capacity; and a third independent claim that is directed to assigning tunnels based on tunnel type.

The first two independent claims are based on a combination of old claim 1 and claim 11, and old claim 1 and claim 12 respectively. In connection with old claims 11, the Examiner explained that the features of these claims were disclosed in Venkatanarayan, since Venkatanarayan teaches load balancing across active adaptors by selecting an adaptor (processing unit) with the most available bandwidth (Office Action at paragraph 18). In connection with claim 12, the Examiner also explained that Venkatanarayan taught the use of load balancing algorithm to select a port with the most available bandwidth for forwarding packets. (Office Action at paragraph 19).

This application relates to a method and apparatus for allocating processing capacity of system processing units in an extranet gateway. As discussed by applicants (see e.g. paragraph 7) an Extranet Gateway may be used to connect a VPN site to one or more VPN tunnels. As the number of VPN tunnels supported by a given Extranet Gateway increases, the load on its CPU

increases. (See e.g. Paragraph 8). To overcome this issue, Extranet gateways were known to be implemented using multiple CPUs and encryption accelerators (SPUs). (See e.g. Paragraph 9). VPN tunnels would then be assigned to one of the multiple SPUs using a round robin assignment scheme. (See e.g. Paragraph 10).

Applicants recognized that assigning VPN tunnels in a round-robin fashion was not ideal and proposed a more intelligent way of assigning VPN tunnels to System Processing Units (SPUs) in an Extranet Gateway. Specifically, applicants proposed to obtain an initial estimate of the amount of processing capacity of each SPU and keep track of processing requirements that have been assigned to the SPUs. As new tunnels are required to be established, the tunnel may be assigned by looking to see which processor is estimated to have the most available capacity, the highest relative amount (percentage available) processing capacity, or by looking to see which SPU could most efficiently handle the new tunnel. The new claims have been drafted to highlight these aspects, as well as the fact that the tunnels are assigned based on estimated bandwidth. Several of the new dependent claims have been crafted to focus on the particular way in which the estimated bandwidth is calculated. Applicants respectfully submit that these features are not taught/suggested by the art of record. In light of these deficiencies, applicants respectfully submit that a rejection of the new claims under 35 USC 103 is not warranted.

Conclusion

In view of foregoing remarks, it is respectfully submitted that the application is now in condition for allowance and an action to this effect is respectfully requested. If there are any questions or concerns regarding the amendments or these remarks, the Examiner is requested to telephone the undersigned at the telephone number listed below.

Extension of Time

A Request for Continued Examination is being submitted concurrently herewith. Applicants hereby request a one month extension of time to respond to the outstanding Office Action. Payment for the Request for Continued Examination and one month extension of time is being submitted concurrently herewith. If any fees are due in connection with this filing, the Commissioner is hereby authorized to charge payment of the fees associated with this communication or credit any overpayment to Deposit Account No. 502246 (Ref: NN-16263).

Respectfully Submitted

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/John C. Gorecki/
John C. Gorecki, Reg. No. 38,471

Anderson Gorecki & Manaras LLP
P.O. Box 553
Carlisle, MA 01741
Tel: (978) 264-4001
Fax: (978) 264-9119